

ARLINGTON PUBLIC SCHOOLS

In accordance with the provisions of the Massachusetts General laws, Chapter 30A, Section 20, notice is hereby given for the following meeting of the:

***Arlington School Committee
Standing Subcommittee: Facilities
Wednesday, September 14, 2022
5:00 PM***

*Arlington High School
869 Massachusetts Avenue
School Committee Room - Sixth Floor
Arlington, MA 02476*

Open Meeting (Jeff Thielman)

Playground Updates

Discussion of Onsite-Insight Report for Ottoson Middle School

Gibbs 2024-25 Space Considerations

New Business

Adjournment

The listings of matters are those reasonably anticipated by the Chair, which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

Stated times and time amounts, listed in parenthesis, are the estimated amount of time for that particular agenda item. Actual times may be shorter or longer depending on the time needed to fully explore the topic.

Submitted by Jeff Thielman

Massachusetts law requires all open session meetings of public bodies to be accessible to members of the public, including those with disabilities. If you need reasonable accommodations in order to participate in the meeting, contact the Administrative Assistant to the Arlington School Committee Liz Diggins at ediggins@arlington.k12.ma.us.



Town of Arlington, Massachusetts

Location

Summary:

Arlington High School
869 Massachusetts Avenue
School Committee Room - Sixth Floor
Arlington, MA 02476



Town of Arlington, Massachusetts

Open Meeting (Jeff Thielman)



Town of Arlington, Massachusetts

Playground Updates



Town of Arlington, Massachusetts

Discussion of Onsite-Insight Report for Ottoson Middle School

ATTACHMENTS:

Type	File Name	Description
▢ Presentation	22032_Ottoson_Middle_School_PRELIM_(1).pdf	Capital Needs Assessment - Ottoson Middle School

Capital Needs Assessment

PRELIMINARY REPORT

Prepared for:



**ARLINGTON
MASSACHUSETTS**

869 Massachusetts Avenue
Arlington, MA 02476

Ottoson Middle School

Arlington, MA

April 29, 2022



Ottoson Middle School: Property Overview

Total Buildings: 1

<u>Building Type</u>	<u># of Buildings</u>	<u>Approx. GSF</u>
Elevator	1	170,114
Walk-up	-	-
Totals:	1	170,114

Occupancy: Public Middle School

Property/Development Age: 25

Year of Construction: 1921

Most Recent Rehab: 1997

City & State: Arlington, MA

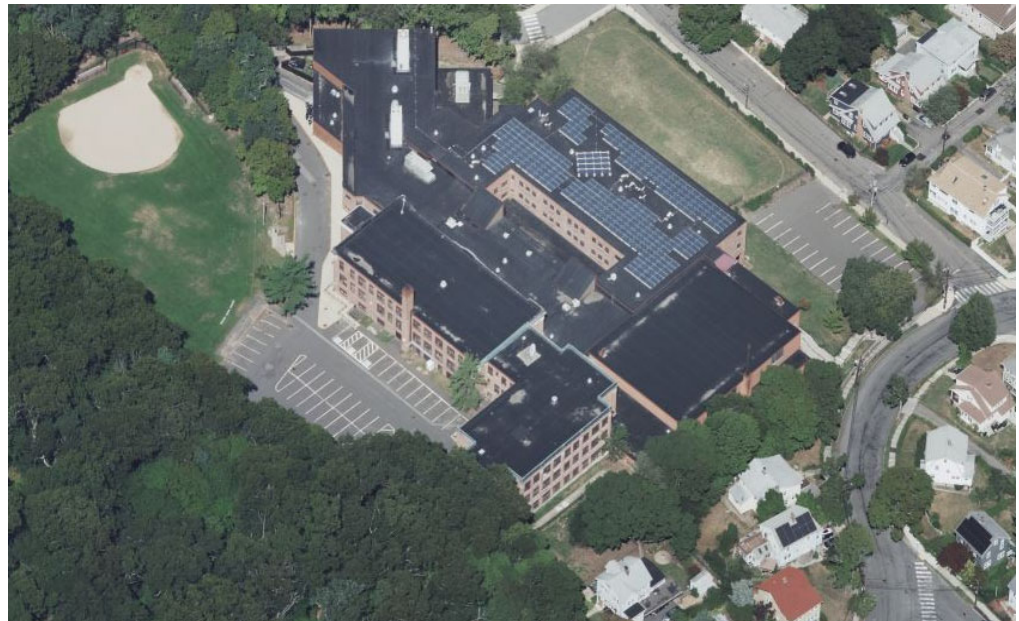
Addresses: 63 Acton Street

OSI Project Number: 22032

Assessment Date: April 19th, 2022

Assessment Conditions: High 40's, Sunny

Assessor: Matthew Chown



Property Description:

Ottoson Middle School is a public middle school located in a predominantly residential neighborhood of Arlington, MA. The school serves students in grades seven and eight. The facility was originally constructed circa 1921 and underwent a major rehabilitation (including reported addition) circa 1997. The facility contains two gymnasiums (herein referred to as blue and wood gym), a library and media center, an array of classrooms and staff/administrative space, several common restrooms, hallways, and stairways.

Ottoson Middle School

Arlington, MA

Ottoson Middle School is a public middle school located in a predominantly residential neighborhood of Arlington, MA. The school serves students in grades seven and eight. The facility was originally constructed circa 1921 and underwent a major rehabilitation (including reported addition) circa 1997. The facility contains two gymnasiums (herein referred to as blue and wood gym), a library and media center, an array of classrooms and staff/administrative space, several common restrooms, hallways, and stairways. Overall, the development is in fair to good condition. The interior spaces and various building systems are adequately appointed and maintained. That said, the property has substantive capital needs anticipated in the coming years; a number of systems and components are at or approaching the end of their useful lives. Anticipated near-term needs include asphalt pavement resurfacing, localized concrete flatwork repairs/replacement, localized retaining wall repairs, as-needed stormwater drainage improvements, upgrade/replacement of the building's HVAC pneumatic control system (i.e., conversion to a direct digital control system), older rooftop-mounted HVAC equipment replacement, brick and stone masonry cladding repairs/replacement, deteriorated exterior caulking replacement, EPDM roof assembly replacement, and interior renovation efforts (e.g., repainting, floor covering replacement, displaced ceiling tile replacement, as-needed bathroom fixture and accessory replacement, etc.).

Future capital actions are based on useful life expectations and assume continued effective maintenance and physical management. Costs for the twenty-year plan total \$12,929,830, or \$76.01 per gross square feet in current dollars (\$16,243,016, or \$95.48 per gross square feet in inflated dollars).

Site Systems

The facility is located on a moderately sloped parcel with a pair of asphalt-paved parking lots (one at rear and northeast corner of development). For the purposes of this report, the front of the building is considered to be facing north. A recreational park is located towards the southwest corner of the facility and is reportedly the responsibility of the Town of Arlington, MA.

Concrete walkways and site steps facilitate pedestrian access throughout the site. A mix of stone and concrete block masonry retaining walls are present at steep elevation changes. Metal chain-link fencing is present along the perimeter of the north end recreational field as well as along portions of the east property limit. Pole-mounted light-emitting diode (LED) fixtures facilitate illumination along the roadways and parking areas. Additional site elements include landscaping comprised of lawn areas, trees, shrubs, and plantings, wood entry signage, as well as site distribution systems.

- 1. Costs for the development's site related elements total \$899,219 or \$5.29 per gross square feet in inflated dollars.**
2. The asphalt pavement appears to date to the 1997 rehabilitation. Deterioration in the form of cracking, depressions, and evidence of fatigue was observed within the asphalt. Costs to scarify and resurface the asphalt pavement are shown in Year 1. Future costs to carry out preventative maintenance repairs in the form of crack filling, sealcoating, and restriping are shown every five years starting in Year 6.
3. The concrete walkways, site steps, and landings vary in condition. Management reports concrete step replacement was carried out in recent years. Localized cracking and concrete spalls were observed within the steps, landings, and walkways. Periodic costs to carry out sectional concrete repairs/replacement (including as-needed refurbishment of metal railings/guardrails) are shown every eight years starting in Year 1.
4. Several displaced concrete block masonry units were observed within the front elevation retaining walls. Furthermore, localized mortar loss/deterioration was noted within the development's perimeter stone retaining walls. Periodic costs to carry out as-needed retaining wall repairs/replacement are shown every five years starting in Year 1. These costs also include pressure washing of the segmental block retaining walls present at the front of the development.
5. The development's metal chain-link fencing is in serviceable condition at the present time. Periodic costs to carry out sectional repairs/replacement are shown every five years starting in Year 2.
6. A dumpster enclosure comprised of metal chain-link fencing is located at the south end of the building (i.e., abutting food receiving area). Future replacement of the dumpster enclosure is shown in Years 5 and 20.
7. No problems/concerns were reported with regards to the pole-mounted LED fixtures. Future replacement of the LED fixtures is shown in Years 5 and 20, based on a fifteen-year expected useful service life.
8. Periodic costs to carry out as-needed landscaping repairs/upgrades including tree pruning efforts are shown every five years starting in Year 1.
9. Future replacement of the development's wood entry signage is shown in Year 5.
10. Based on discussions with management, the development is experiencing stormwater drainage issues at the present time. The full extent of these issues is unconfirmed. A place marker allowance to carry out as-needed repairs/improvements are shown in Year 1, pending a detailed review by a qualified design professional.

Mechanical Room

The building's central mechanical room houses the heating generation equipment. A pair of Lochinvar natural gas-fired condensing boilers (800 MBH energy input each) facilitate hydronic heat generation for the building. A Smith cast-iron sectional boiler facilitates supplemental heating for the facility. Augmenting the boilers are Grundfos micro-VFD boiler water circulation pumps, a pair of base-mounted hydronic heat circulation pumps, as well as variable frequency drives governing hydronic heat circulation pump performance. Domestic hot water (DHW) generation for the building is facilitated via a Navien condensing boiler (150 MBH energy input) working in concert with an HTP indirect-fired domestic hot water (DHW) storage tank (80-gallon storage capacity). Augmenting this system are a pair of Grundfos micro-VFD circulation pumps.

11. Costs related to the development's boilers and boiler room systems total \$1,009,085 or \$5.93 per gross square feet in inflated dollars.

12. The Lochinvar natural gas-fired condensing heating boilers are in good operating condition at the present time. No problems/concerns were reported during the site review. Future replacement of the boilers is shown in Year 12, based on a twenty-year expected useful service life. Future replacement of the Smith cast-iron sectional boiler is shown in Year 5 (assumed limited usage as boiler is utilized for supplemental heating).
13. The development features a pneumatic control system governing interior environment conditions. Based on discussions with management, the pneumatic control system is inefficient at the present time and several spaces are experiencing balancing issues (i.e., lack of heat versus remainder of building). An allowance to replace the pneumatic control system with a direct digital control (DDC) system is shown in Year 1, however a full detailed review by a qualified design professional is required to determine the full scope and cost(s) of the required replacement work. The existing pneumatic control actuators, air compressor, air dryer, and various peripherals are included as part of the replacement/upgrade work.
14. No problems/concerns were reported with regards to the heating and domestic hot water circulation pumps. Future replacement costs are shown based on pump age, observed conditions, and pump expected useful service lives. Replacement of the variable frequency drive controllers serving the hydronic heat circulation pumps is shown in Year 12.
15. No problems/concerns were reported with regards to the domestic hot water (DHW) generation system. Future replacement of the Navien DHW boiler is shown in Year 13, based on a twenty-year expected useful service life. Replacement of the indirect-fired DHW storage tank is shown in Year 8, based on a fifteen-year expected useful service life.
16. Based on discussions with management, underground fuel oil storage tanks are present at the development and were previously utilized as the heating source for the building's boilers. These tanks have reportedly been abandoned in place.

Building Mechanical and Electrical Systems

Major building systems include the fire sprinkler system (equipped with a backflow preventer), distribution piping for domestic hot and cold water, hydronic heat, sanitary wastewater, and natural gas services, heating, ventilation and air conditioning (HVAC) services, electrical, fire detection, security, and elevators.

17. Costs related to the development's mechanical and electrical systems total \$3,699,755 or \$21.75 per gross square feet in inflated dollars.

18. The building is equipped with a wet sprinkler system (city pressure supply). This system also includes a backflow preventer, a device designed to keep stagnant sprinkler water from flowing back into the potable water system. The fire suppression system is shown being maintained and monitored during the plan's timeframe.
19. No systemic problems/concerns were reported with regards to the building's distribution piping systems (i.e., no issues with regards to pin hole leaks, pipe breakage, or back-ups reported). These distribution piping systems are shown being maintained and monitored during the plan's timeframe.
20. An array of packaged rooftop units (RTU's) facilitate space heating/cooling for various spaces. The RTU's vary in age and condition. Replacement costs are shown based on RTU age, observed conditions, and a normal expected useful service life of twenty-years.
21. Three split-system air conditioners facilitate space cooling for the computer rooms. The air conditioners are operating beyond the end of their normal expected useful service lives, and replacement costs are shown in Years 1 and 16.
22. Three ductless mini-split system air conditioners facilitate space cooling for various interior spaces. Replacement costs are shown based on air conditioner age, observed conditions, and a normal expected useful service life of fifteen-years.
23. Eight heating and ventilation units serve various interior spaces including the blue gymnasium and locker rooms. The H/V units appear to date to the 1997 rehabilitation. Costs for as-needed replacement of the H/V units are shown in Years 1-8.
24. Each classroom is equipped with a pneumatically-controlled ventilator that is equipped with a wet heat loop from the boiler plant. Management reports several of the ventilator dampers are problematic at the present time; the ventilators date to the 1997 rehabilitation. Replacement of the ventilators is shown in Year 1, concurrent with replacement/upgrade of the building's pneumatic control system.
25. A series of rooftop-mounted exhausters facilitate ventilation for the building. Periodic costs to carry out as-needed replacement of the exhausters are shown every five years starting in Year 1.
26. Periodic costs to carry out as-needed electrical system/component repairs/replacement are shown every five years starting in Year 1. It is recommended that periodic infrared thermographic inspections and analysis of utility connections, main switchboard, breaker panels, disconnect switches, etc. be carried out to identify potential 'hot spots' in the electrical equipment that may cause potentially hazardous situations or a major source of system inefficiency. These inspections are shown being handled out of operating accounts.

27. No problems or concerns were reported with regards to the security camera system (reportedly fully upgraded in recent years). Periodic costs for as-needed camera and component repairs/replacement are shown every five years starting in Year 3.
28. The building contains solar photovoltaic panels and inverters on the northern upper roof level. Based on discussions with management, the PV panels and inverters are not the responsibility of the development; subsequently no costs for these components are shown during the plan's timeframe.
29. The building contains a central fire alarm control panel monitoring hardwired end devices. No active trouble signals were illuminated during the site review. Future replacement of the fire alarm control panel including end devices is shown in Year 6.
30. The facility is equipped with a public address system for paging/announcements/instructions. Management reports 50% of the PA system is not in operation. Costs for a system upgrade/replacement are shown in Year 1 (including clock system, which is also problematic).
31. A video entry intercom system regulates visitor entry at the main entrance. Future replacement of the intercom system is shown in Year 15, based on a twenty-year expected useful service life.
32. A pair of hydraulic-type elevators facilitate vertical access within the building. The elevators were reportedly modernized circa 2021 and are maintained under the terms of a full service contract. Future costs to renovate the cab interiors and replace door operators are shown in Year 14. Future modernization of the elevators is not anticipated during the plan's timeframe. No problems/concerns were reported with regards to the vertical platform lift (recently replaced); the platform lift is shown being maintained and monitored during the plan's timeframe.

Building Architectural Systems

The building predominantly contains flat roofs constructed utilizing a mechanically fastened Ethylene Propylene Diene Monomer (EPDM) roof assembly. The exterior walls are predominantly clad in brick and stone masonry; limited standing seam metal cladding is also present at select upper wall areas. Exterior caulking is installed along window and door perimeters as well as at masonry control joints. A mix of single and double leaf metal and fiberglass doors are present at main entries, emergency exits, and service spaces. A metal overhead door is present at the food receiving area. Automatic door operators are present at the main entrance and vestibule. Exterior windows are prefinished aluminum-framed fixed and operable models containing insulating glass units (IGU's). Building and soffit-mounted light fixtures facilitate illumination along the building perimeter. Interior spaces include hallways and stairways, classrooms, office/administrative spaces, a pair of gymnasiums, a cafeteria, restrooms, and a food preparation kitchen. Interior finishes/materials include a mix of suspended ceiling tile, painted wall and ceiling surfaces, vinyl composition tile (VCT), hardwood, epoxy, rubber flooring, and carpeting.

33. Costs related to the development's architectural systems total \$10,634,956 or \$62.52 per gross square feet in inflated dollars.

34. Localized cracking and deteriorated cementitious parge coat were observed within the exposed portions of concrete foundation wall. Repairs to the concrete foundation walls are included as part of exterior wall rehabilitation work discussed below. No problems/concerns were reported with regards to the building's main structural framing systems. Isolated areas of apparent efflorescence/moisture staining were observed within the abandoned boiler spaces (i.e., underside of concrete ceilings within basement level) of the building. An allowance for future as-needed concrete repairs and waterproofing efforts are shown in Year 6.
35. An elevated concrete walkway is present at the cafeteria emergency egress. Exposed and corroded reinforcing steel as well as concrete spalls were observed on the underside of the walkway. Costs to carry out concrete repairs as well as addressing corroded reinforcing steel are shown in Year 1.
36. The exterior doorways appear to vary in age and condition (i.e., majority of doors appear to date to 1997 rehabilitation, select doors appear to predate rehabilitation). Replacement of the exterior doors is shown based on doorway age, observed conditions, and doorway expected useful service lives. Future replacement of the food receiving area metal overhead door is shown in Year 5. Future replacement of the automatic door operators is shown in Year 10.
37. Several areas of mortar loss, cracking, spalls/deterioration, exposed and corroded reinforcing steel were observed within the brick and stone cladding, particularly at the north facing elevation of the original building (i.e., exterior walls over roof level). Furthermore, several steel lintels present above window openings exhibit corrosion and deformation. Costs to carry out repairs in the form of repointing, crack repairs, localized brick and stone replacement, and repairs to deteriorated lintel are shown in Year 1. However, it is recommended that these areas of deteriorated be further reviewed by a building envelope professional to determine the full scope and costs of required repair/replacement work.
38. Cohesive/adhesive failures were observed within the exterior caulking. Replacement costs are shown in Years 1 and 16, based on a fifteen-year expected useful service life.
39. The exterior windows reportedly date to the 1997 rehabilitation and are reportedly in good operating condition at the present time. Isolated failed insulating glass units (IGU's) were noted during the site review and costs for localized replacement are shown in Years 1-15 (failure of an IGU is ultimately apparent when condensation forms between the glass panes). Future replacement of the exterior windows is shown in Year 16.
40. The majority of the exterior light fixtures appear to have been upgraded with light-emitting diode (LED) models in recent years. Future replacement of the building and soffit-mounted light fixtures is shown in Year 11.
41. Based on discussions with management, areas of active roof leakage are occurring through the EPDM roof assemblies. Several areas of pronounced water ponding were also noted during the site review. Furthermore, localized deteriorated

- seams as well as soft spots (i.e., potentially saturated insulation) were noted during the site review. Based on roof surface serial numbers, the majority of the EPDM roof assemblies date to the 1997 rehabilitation. Replacement of the EPDM roof assemblies is shown in Year 1, based on the roofs exceeding a normal expected useful service life of twenty-years.
42. Pronounced vegetation growth and evidence of poor drainage was noted at select canopies (i.e., northeast corner of building). Costs to replace these roof sections are included with the aforementioned EPDM roof assembly replacement work.
 43. No problems/concerns were reported with regards to the metal access roof doorways and roof hatches. Future replacement costs are shown in Year 5.
 44. Common hallway, main lobby, and stairway finishes include suspended ceiling tile, painted wall surfaces, vinyl composition tile (VCT), and rubber flooring (stairways). Periodic costs to carry out as-needed repainting efforts are shown throughout the plan's timeframe. Localized cracking/wear was observed within the VCT flooring. Replacement of the VCT flooring is shown in Years 1-5. Costs for as-needed replacement of the rubber flooring are shown every five years starting in Year 1. Future replacement of the suspended ceiling tile is shown in Year 15. Periodic costs to carry out as-needed replacement of the solid core wood interior passage doors are shown every five years starting in Year 1.
 45. Approximately 70% of the interior light fixtures are light-emitting diode (LED) models. The remaining light fixtures are shown being converted/replaced out of operating accounts.
 46. Classroom, library, cafeteria, as well as office/administration space finishes/materials include suspended ceiling tile, painted wall surfaces, vinyl composition tile (VCT), and broadloom carpeting (library and select offices). Costs for as-needed repainting efforts are shown throughout the plan's timeframe. Future replacement of the suspended ceiling tile is shown starting in Year 15. Replacement of the VCT flooring and carpeting is shown based on floor covering age, observed conditions, and floor covering expected useful service lives.
 47. Periodic costs to carry out as-needed replacement of classroom cabinetry sets, projectors, furnishings, fixtures, equipment, etc. are shown annually starting in Year 1.
 48. The building contains two gymnasiums, one gymnasium contains wood flooring and the second gym contains rubberized flooring (i.e., blue gym). Several displaced suspended ceiling tiles were noted within the blue gymnasium and pose a potential overhead risk. Replacement of the suspended ceiling tile including carrying out insulation improvements is shown in Year 1. Replacement of the rubberized flooring present within the blue gym is shown in Year 5. Costs to refinish the wood gymnasium flooring are shown in Years 1 and 11 (including replacement of wood stage flooring in Year 1). Periodic costs to carry out as-needed gymnasium/stage equipment replacement are shown every five years starting in Year 1.
 49. No problems/concerns were reported with regards to the cafeteria commercial-grade food preparation equipment. Periodic costs to carry out as-needed equipment replacement are shown every five years starting in Year 2.

50. Locker room and common restroom finishes/materials include suspended ceiling tile, painted ceiling surfaces (girl's locker room), painted wall surfaces, ceramic tile walls, as well as epoxy flooring. Costs for repainting efforts are shown over five year periods starting in Years 1 and 11 (including as-needed repairs to ceramic tile walls). Future replacement of the suspended ceiling tile is shown in Year 15. Costs to refurbish the epoxy flooring are shown in Years 1 and 11. Periodic costs for as-needed fixture, accessory, and equipment replacement are shown throughout the plan's timeframe.

Additional Notes:

1. The Physical Assessment of the property was conducted on April 19th, 2022. Additional information was provided to ON-SITE INSIGHT by site staff and others. OSI was represented on this assignment by Matthew Chown. We would like to thank site staff for their assistance.
2. Regular updates of this plan are recommended to ensure careful monitoring of major building systems and to adjust the program to accommodate unanticipated circumstances surrounding the buildings, operations, and/or occupants.
3. This report is delivered subject to the conditions on Appendix A, *Statement of Delivery*.



View of widespread pattern cracking and evidence of fatigue within asphalt-paved surface parking area as seen at rear of development



Additional view of pattern cracking and evidence of fatigue within asphalt pavement



View of northeast corner lower asphalt parking lot – note similar deterioration/age related wear



View of east end concrete site steps and metal railings – railings exhibit paint peeling/weathering



View of concrete deterioration within walkway
as seen towards southeast corner of building



View of cast-in-place concrete retaining wall present towards
northeast corner of building – note concrete spalls/deterioration



View of concrete segmental block masonry
retaining walls as seen at north end of building –
several displaced masonry units noted



View of development wood entry signage



View of metal chain-link dumpster enclosure as seen at food receiving area



View of Lochinvar natural gas-fired primary hydronic heating boilers



View of Smith cast-iron sectional supplemental heating boiler



View of natural gas-fired domestic hot water boiler and indirect-fired domestic hot water storage tank facilitating domestic hot water generation for facility



View of base-mounted hydronic heat circulation pumps – 20-horsepower rating each



View of hydronic heat circulation pump variable frequency drive controller



View of air compressor forming part of pneumatic control system governing interior environment conditions



View of main incoming water supply line for fire suppression system – note backflow preventer is in place



View of sample of split-system air conditioner (one of several) – unit in photograph serves computer room



View of packaged rooftop unit serving media center (one of several RTU's serving facility)



View of ductless mini-split system air conditioners serving media center



View of packaged rooftop HVAC unit serving cafeteria



View of typical classroom unit ventilator – several ventilators are reportedly problematic at the present time



View of solar photovoltaic array – reportedly not development responsibility



View of solar photovoltaic array inverter – reportedly not development responsibility



View of central fire alarm control panel monitoring hardwired end devices at building



View of elevator cab interiors – one of two hydraulic-type elevators serving development



View of elevator hydraulic power unit – both recently modernized per management



View of vertical platform lift – recently replaced



View of typical building architecture as seen at south elevation



View of cracking within exposed portion of concrete foundation wall – cementitious parge coat exhibits delaminations/wear



View of concrete spalls and exposed/corroded reinforcing steel as seen at underside of elevated concrete walkway present towards northwest corner of building



View of main entry doorway framing exhibiting corrosion/wear



View of double leaf hollow metal service doors exhibiting age related wear/weathering



View of localized deteriorated brick masonry units at window corner



View of localized mortar loss within brick masonry cladding



View of pronounced stone cladding deterioration as seen at north facing elevation of original building—also note exposed and corroded reinforcing steel



Additional view of corroded/deteriorated reinforcing steel within stone cladding



View of steel lintel exhibiting corrosion/deterioration as seen at north elevation of original building



View of brick masonry chimney – widespread mortar loss/deterioration noted



Exterior windows are prefinished aluminum-framed fixed and operable models containing insulating glass units (IGU's) – limited failed IGU's noted during assessment



View of deteriorated caulking (i.e., cohesive failures) as seen at window perimeter



Several areas of water ponding observed on EPDM roof surfaces



Additional view of water ponding on roof surfaces as seen at lower roof area



View of poorly adhered section of roof membrane



View of EPDM roof assembly conditions as seen at uppermost roof (i.e., original building)



View of widespread vegetation growth and evidence of poor drainage as seen at canopy roof located towards northeast corner of building



View of typical common hallway finishes – suspended ceiling tile, painted wall surfaces, and vinyl composition tile (VCT) flooring



View of typical common stairway finishes – note rubber landings and stair treads



View of typical classroom finishes – suspended ceiling tile, painted wall surfaces, and vinyl composition tile (VCT) flooring



Localized cracking/deterioration noted within VCT flooring



View of metal locker conditions



View teacher's lounge finishes - suspended ceiling tile, painted wall surfaces, and vinyl composition tile (VCT) flooring



View of typical common restroom finishes and fixtures – age related wear



View of typical locker area finishes and fixtures



View of main gym finishes – note wood flooring



View of blue gym finishes – note rubberized flooring – also note displaced suspended ceiling tiles and potential overhead risk



View of main gym stage flooring exhibiting age related wear



View of main gym bleachers –
reportedly in serviceable condition



View of sample of office space finishes – suspended ceiling
tile, painted wall surfaces, and broadloom carpeting



View of library finishes and furnishings – suspended ceiling
tile, painted wall surfaces, and broadloom carpeting



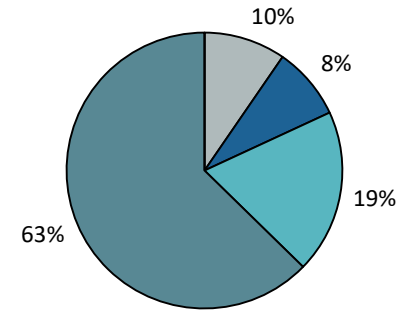
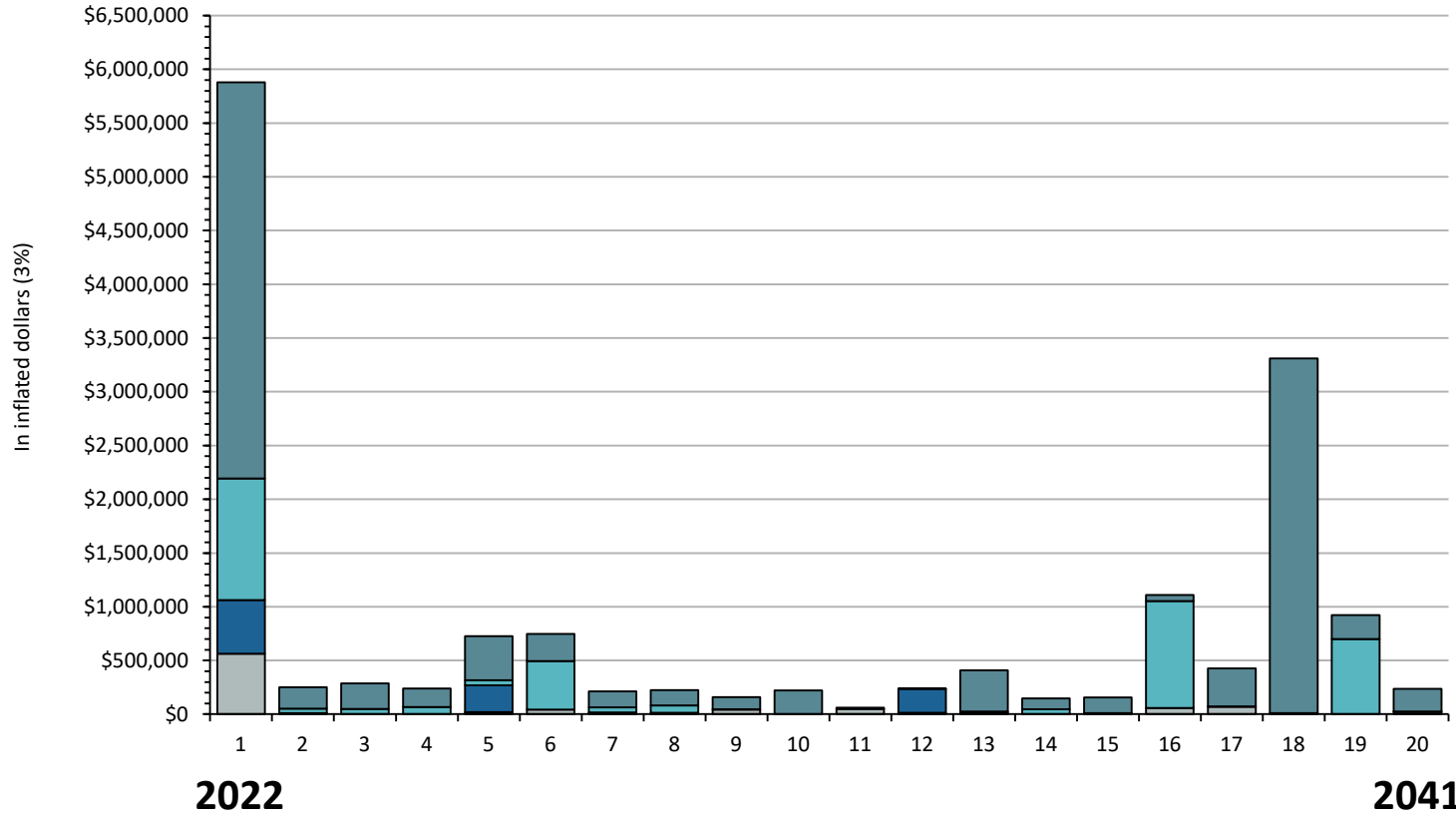
View of commercial kitchen finishes and equipment



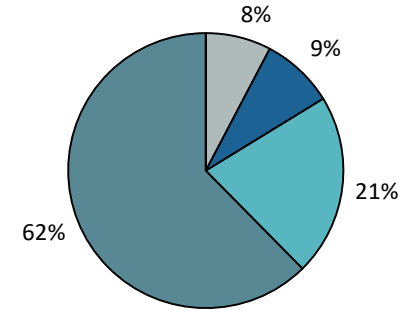
View of cafeteria finishes – suspended ceiling tile, painted wall surfaces, and vinyl composition tile (VCT) flooring

Capital Needs Summary

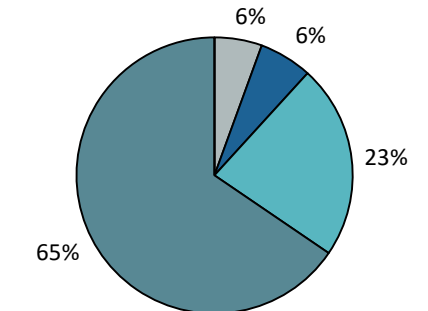
Ottoson Middle School



Year One Distribution



Ten Year Distribution



Twenty Year Distribution

Total Costs by Building System (inflated dollars)

	In Year 1	In Years 1-10	In Years 1-20
Site Systems	\$563,404 or \$3.31 /GSF	\$687,968 or \$4.04 /GSF	\$899,219 or \$5.29 /GSF
Mechanical Room	\$500,000 or \$2.94 /GSF	\$768,800 or \$4.52 /GSF	\$1,009,085 or \$5.93 /GSF
Building Mech. & Elec.	\$1,129,000 or \$6.64 /GSF	\$1,909,108 or \$11.22 /GSF	\$3,699,755 or \$21.75 /GSF
Building Architectural	\$3,687,299 or \$21.68 /GSF	\$5,584,297 or \$32.83 /GSF	\$10,634,956 or \$62.52 /GSF
In inflated dollars:	\$5,879,703 or \$34.56 /GSF	\$8,950,174 or \$52.61 /GSF	\$16,243,016 or \$95.48 /GSF
In current dollars:	\$5,879,703 or \$34.56 /GSF	\$8,560,446 or \$50.32 /GSF	\$12,929,830 or \$76.01 /GSF

Capital Needs Summary

Ottoson Middle School Arlington, MA

OSI Ref: **22032**
Property Age: **25 Years**
Financing: **Conventional**

Number of Buildings: **1**
Total Number of Units: **170114**
Occupancy: **Public Middle School**

	2022 Year 1	2023 Year 2	2024 Year 3	2025 Year 4	2026 Year 5	2027 Year 6	2028 Year 7	2029 Year 8	2030 Year 9	2031 Year 10
Site Systems										
Surface	\$463,404	\$9,418	\$0	\$0	\$18,008	\$43,043	\$10,918	\$0	\$43,177	\$0
Site Distribution Systems	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Sub-Total	\$563,404	\$9,418	\$0	\$0	\$18,008	\$43,043	\$10,918	\$0	\$43,177	\$0
Mechanical Room										
Boilers	\$500,000	\$0	\$0	\$0	\$251,045	\$0	\$4,657	\$0	\$0	\$0
Boiler Room Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,098	\$0	\$0
Mechanical Sub-Total	\$500,000	\$0	\$0	\$0	\$251,045	\$0	\$4,657	\$13,098	\$0	\$0
Building Mech. & Electrical										
Mechanical	\$1,071,500	\$42,745	\$44,027	\$67,203	\$46,709	\$48,110	\$49,553	\$63,339	\$1,900	\$1,957
Electrical	\$57,500	\$0	\$5,305	\$0	\$0	\$403,112	\$0	\$6,149	\$0	\$0
Elevators	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mechanical & Electrical Sub-Total	\$1,129,000	\$42,745	\$49,332	\$67,203	\$46,709	\$451,222	\$49,553	\$69,488	\$1,900	\$1,957
Building Architectural										
Structural and Exterior	\$533,790	\$3,273	\$3,371	\$3,472	\$9,766	\$30,926	\$3,794	\$3,908	\$4,025	\$108,854
Roof Systems	\$2,502,750	\$0	\$0	\$0	\$8,441	\$0	\$0	\$0	\$0	\$0
Hallways	\$85,585	\$77,853	\$80,188	\$54,735	\$56,377	\$41,148	\$30,442	\$31,356	\$0	\$0
Stairways	\$45,845	\$0	\$0	\$0	\$0	\$53,147	\$0	\$0	\$0	\$0
Main Lobby	\$33,870	\$0	\$0	\$0	\$0	\$8,521	\$0	\$0	\$0	\$0
Classrooms/Library	\$80,314	\$77,573	\$119,845	\$82,298	\$84,767	\$93,106	\$89,929	\$92,627	\$95,406	\$98,268
Office/Administration	\$16,588	\$17,086	\$17,598	\$18,126	\$32,492	\$0	\$0	\$0	\$0	\$0
Gymnasiums	\$242,067	\$0	\$0	\$0	\$205,540	\$11,593	\$0	\$0	\$0	\$0
Cafeteria	\$87,000	\$10,300	\$2,652	\$0	\$0	\$0	\$11,941	\$0	\$0	\$0
Locker Rooms	\$35,235	\$0	\$0	\$0	\$0	\$2,898	\$0	\$0	\$0	\$0
Restrooms	\$24,256	\$13,083	\$13,476	\$13,880	\$14,296	\$12,172	\$12,538	\$12,914	\$13,301	\$13,700
Building Architectural Sub-Total	\$3,687,299	\$199,167	\$237,130	\$172,510	\$411,679	\$253,512	\$148,643	\$140,804	\$112,732	\$220,822
Total Capital Costs	\$5,879,703	\$251,330	\$286,462	\$239,713	\$727,441	\$747,777	\$213,771	\$223,390	\$157,808	\$222,779

Ottoson Middle School

Costs on these two pages are aggregated by category from the Capital Needs worksheets which follow. Total capital costs on these two pages are carried forward to line F of the Replacement Reserve Analysis(es) that follow.

2032 Year 11	2033 Year 12	2034 Year 13	2035 Year 14	2036 Year 15	2037 Year 16	2038 Year 17	2039 Year 18	2040 Year 19	2041 Year 20	
\$49,899	\$12,657	\$0	\$0	\$0	\$57,847	\$69,368	\$0	\$0	\$21,480	Site Systems
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Surface
										Site Distribution Systems
\$49,899	\$12,657	\$0	\$0	\$0	\$57,847	\$69,368	\$0	\$0	\$21,480	Site Sub-Total
\$0	\$224,246	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Mechanical Room
\$0	\$0	\$16,040	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Boilers
										Boiler Room Systems
\$0	\$224,246	\$16,040	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Mechanical Sub-Total
\$2,016	\$2,076	\$2,139	\$2,203	\$2,269	\$983,856	\$2,407	\$2,479	\$700,551	\$2,630	Building Mech. & Electrical
\$10,079	\$0	\$7,129	\$0	\$6,807	\$11,685	\$0	\$8,264	\$0	\$0	Mechanical
\$0	\$0	\$0	\$44,056	\$0	\$0	\$0	\$0	\$0	\$0	Electrical
										Elevators
\$12,095	\$2,076	\$9,267	\$46,259	\$9,076	\$995,541	\$2,407	\$10,744	\$700,551	\$2,630	Mechanical & Electrical Sub-Total
\$19,053	\$4,398	\$4,530	\$4,666	\$4,806	\$2,975,531	\$0	\$0	\$0	\$0	Building Architectural
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Structural and Exterior
\$47,702	\$35,291	\$36,350	\$0	\$41,671	\$98,221	\$85,121	\$87,674	\$46,901	\$0	Roof Systems
\$61,612	\$0	\$0	\$0	\$46,272	\$71,425	\$0	\$0	\$0	\$0	Hallways
\$9,878	\$0	\$0	\$0	\$18,051	\$11,451	\$0	\$0	\$0	\$0	Stairways
\$31,887	\$25,923	\$80,382	\$27,501	\$82,363	\$92,624	\$87,379	\$90,000	\$92,700	\$95,481	Main Lobby
\$5,161	\$5,315	\$5,475	\$5,639	\$39,530	\$15,600	\$16,068	\$16,550	\$17,047	\$0	Classrooms/Library
\$123,034	\$0	\$0	\$0	\$0	\$15,580	\$0	\$0	\$0	\$0	Office/Administration
\$12,095	\$13,842	\$3,564	\$0	\$64,890	\$0	\$16,047	\$0	\$0	\$0	Gymnasiums
\$47,353	\$0	\$0	\$0	\$18,976	\$3,895	\$0	\$0	\$0	\$0	Cafeteria
\$26,128	\$17,583	\$18,110	\$18,653	\$39,237	\$16,359	\$16,849	\$17,355	\$17,876	\$0	Locker Rooms
										Restrooms
\$383,903	\$102,352	\$148,411	\$56,460	\$355,796	\$3,300,686	\$221,465	\$211,580	\$174,524	\$95,481	Building Architectural Sub-Total
\$445,897	\$341,331	\$173,719	\$102,718	\$364,872	\$4,354,074	\$293,240	\$222,324	\$875,075	\$119,592	Total Capital Costs

SITE SYSTEMS

Replacement Schedule

SITE DISTRIBUTION SYSTEMS

Projected Capital Needs Over Twenty Years

COSTS PROJECTED AT 3%																			SITE SYSTEMS	
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041
SURFACE																				
Roadways and Parking	\$404,320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Crack-Fill and Sealcoat	\$0	\$0	\$0	\$0	\$0	\$14,062	\$0	\$0	\$0	\$0	\$16,301	\$0	\$0	\$0	\$0	\$18,898	\$0	\$0	\$0	\$0
Sidewalks (Asphalt)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Concrete Flatwork	\$34,084	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,177	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$54,695	\$0	\$0	\$0
Retaining Walls	\$15,000	\$0	\$0	\$0	\$0	\$17,389	\$0	\$0	\$0	\$0	\$20,159	\$0	\$0	\$0	\$0	\$23,370	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fencing	\$0	\$9,418	\$0	\$0	\$0	\$0	\$10,918	\$0	\$0	\$0	\$0	\$12,657	\$0	\$0	\$0	\$0	\$14,673	\$0	\$0	\$0
Dumpsters & Enclosures	\$0	\$0	\$0	\$0	\$5,346	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,329
Play Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Lighting (Pole Fixtures)	\$0	\$0	\$0	\$0	\$8,441	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,151
Site Lighting (Bollards)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Landscaping	\$10,000	\$0	\$0	\$0	\$0	\$11,593	\$0	\$0	\$0	\$0	\$13,439	\$0	\$0	\$0	\$0	\$15,580	\$0	\$0	\$0	\$0
Entry Signage	\$0	\$0	\$0	\$0	\$4,221	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SITE DISTRIBUTION SYSTEMS																				
Gas Lines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sanitary Lines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cold Water Lines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Electric Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Stormwater Drainage	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Irrigation System	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Ottoson Middle School

MECHANICAL ROOM

MECHANICAL ROOM				(Expected Useful life)		Replacement Schedule			
Replacement Items	Quantity	Cost per unit in 2022 \$\$	Total Cost in 2022 \$\$	AGE (Years)	EUL (Years)	Year of action AND duration of project		Notes	
BOILERS									
		costs per mgmt.							Lochinvar natural gas-fired condensing boilers
Boilers - Lochinvar	2 ea	60000.00	\$120,000	8	20	12	in 1 Year		Replacement costs including controls - 800 MBH energy input each
		costs per mgmt.							Smith cast iron sectional boiler; supplemental use; no problems/concerns
Boilers - Smith	1 ea	223050.00	\$223,050	25	25	5	in 1 Year		reported; replacement costs - 2,974 MBH energy input
		costs pending specifications							Pneumatic control system governing interior environment conditions
Controls	1 ls	500000.00	\$500,000	25	20	1	in 1 Year		Reportedly inefficient/balancing issues; replacement costs with DDC
									Air compressor and dryer serving pneumatic control system
Air Compressor/Air Dryer	1 ea		\$0	25	25				Costs included with system upgrade work above
									Variable frequency drive controllers serving hydronic pumps
Variable Frequency Drives	2 ea	8500.00	\$17,000	8	20	12	in 1 Year		Future replacement costs
									Grundfos micro-VFD boiler water circulation pumps
Boiler Water Pumps	2 ea	1950.00	\$3,900	8	15	7	in 1 Year		Future replacement costs
									Base-mounted hydronic heat circulation pumps
Heating Water Pumps	2 ea	12500.00	\$25,000	8	20	12	in 1 Year		Replacement costs - 20-horsepower rating each
Chilled Water Pumps	ea								
									Boiler flue exhausts; no problems/concerns reported
Flue Exhaust	1 ls		\$0	varies	25				Costs included with boiler replacement work above
BOILER ROOM SYSTEMS									
									Boiler room piping/valves
Boiler Room Piping/Valves	1 ls		\$0	varies	25				Costs included with boiler plant replacement above
3-Way Valve & Controller	ea								
Heat Exchanger for Bldg. Heat	ea								
		costs per mgmt.							Navien condensing domestic hot water boiler
Domestic Hot Water Generation	1 ea	11250.00	\$11,250	7	20	13	in 1 Year		Replacement costs - 150 MBH energy input
									HTP indirect-fired domestic hot water (DHW) storage tank
Domestic Hot Water Storage	1 ea	6750.00	\$6,750	7	15	8	in 1 Year		Replacement costs - 80-gallon storage capacity
									Grundfos micro-VFD circulation pumps
Domestic Hot Water Pumps	2 ea	1950.00	\$3,900	7	15	8	in 1 Year		Replacement costs
Boiler Room Piping Insulation	ls								
									Underground fuel oil storage tanks present at development
Fuel Oil Storage	1 ls		\$0	varies	25				Reportedly abandoned in place; no costs shown
Fuel Oil Transfer System	ls								
Sump Pumps	ea								

Projected Capital Needs Over Twenty Years

	Costs projected at 3%																	MECHANICAL ROOM			
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041	
BOILERS																					
Boilers - Lochinvar	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$166,108	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Boilers - Smith	\$0	\$0	\$0	\$0	\$251,045	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Controls	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Air Compressor/Air Dryer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Variable Frequency Drives	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,532	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Boiler Water Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$4,657	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Heating Water Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$34,606	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Chilled Water Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Flue Exhaust	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
BOILER ROOM SYSTEMS																					
Boiler Room Piping/Valves	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
3-Way Valve & Controller	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Heat Exchanger for Bldg. Heat	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Domestic Hot Water Generation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,040	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Domestic Hot Water Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,302	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Domestic Hot Water Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,797	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Boiler Room Piping Insulation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Fuel Oil Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Fuel Oil Transfer System	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Sump Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

Ottoson Middle School

BUILDING MECHANICAL AND ELECTRICAL

(Expected Useful life)

Replacement Items	Quantity	Cost per unit in 2022 \$\$	Total Cost in 2022 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule			Notes
BUILDING MECHANICAL									
Compactors	ea								
Building Fire Suppression	1 ls		\$0	25	100				Wet fire suppression system equipped with backflow preventer Maintain and monitor
Distribution Piping Systems	1 ls		\$0	25+	50				No systemic problems/concerns reported Maintain and monitor
Packaged RTU's	1 ea	cost per mgmt. 300000.00	\$300,000	25	20	1	in	1 Year	Packaged rooftop unit serving cafeteria Replacement costs - ~600 MBH gas heat, ~27.5-tons of cooling
Packaged RTU's	1 ea	300000.00	\$300,000	1	20	19	in	1 Year	Packaged rooftop units serving cafeteria
Packaged RTU's	2 ea	300000.00	\$600,000	4 to 5	20	16	in	1 Year	Replacement costs - ~600 MBH gas heat, ~27.5-tons of cooling
Packaged RTU's	3 ea	cost per mgmt. 20000.00	\$60,000	25	20	1	in	1 Year	Packaged rooftop units serving media center (RTU-7, 8, 9) Replacement costs - 40 MBH gas heat, ~2-tons of cooling
Packaged RTU's	3 ea	avg cost per unit 30000.00	\$90,000	1	20	19	in	1 Year	Packaged rooftop units serving classroom and media center (RTU-10) Replacement costs - 70-120 MBH gas heat, ~3.5-7.5-tons of cooling
Split-System A/C	3 ea	cost per mgmt. 10000.00	\$30,000	25	15	1 /16	in	1 Year	Split-system air conditioners serving computer rooms (CU-1,2, 3) Replacement costs - 3-tons of cooling capacity
Ductless A/C	1 ea	10000.00	\$10,000	7	15	8	in	1 Year	Ductless mini-split system air conditioners serving various spaces
Ductless A/C	2 ea	10000.00	\$20,000	11	15	4 /19	in	1 Year	Replacement costs
Heating/Ventilation Units	8 ea	costs pending specifications 40000.00	\$320,000	25	25	1	over	8 Years	Interior heating and ventilation units equipped with heating coils Replacement costs
Classroom Ventilators	+/- 64 ea	costs pending specifications 10000.00	\$640,000	25	25	1	in	1 Year	Ventilation units equipped with hydronic heating, pneumatic actuators
Ventilation & Exhaust	1 ls	7500.00	\$7,500	25	20	1 /6 /11 /16	over	5 Years	System replacement/upgrade costs; A/C units - Operating Rooftop-mounted powered exhausters Annual costs for as-needed replacement
BUILDING ELECTRICAL									
Building Power Wiring	1 ls	7500.00	\$7,500	25+	40	1 /6 /11 /16	in	1 Year	No systemic problems/concerns reported; periodic costs to carry out as-needed component replacement
Security System	1 ls	5000.00	\$5,000	2	5	3 /8 /13 /18	in	1 Year	Security camera system; recently upgraded; future costs for as-needed camera system and component repairs/replacement
Solar PV	326 ea		\$0	7	20				Solar photovoltaic panels and inverters; reportedly not development responsibility; no costs shown
Emergency Lights	1 ls		\$0	varies	10				Emergency battery-powered light fixtures Maintain and monitor - Operating
Smoke / Fire Detection	1 ls	340228.00	\$340,228	14	20	6	in	1 Year	Central fire alarm control panel monitoring hardwired end devices Future replacement costs including end devices
Public Address System/Clocks	1 ls	costs pending specifications 50000.00	\$50,000	25	30	1	in	1 Year	Central system for paging/announcements/instructions 50% of system not in operation including clocks; system upgrade/replacement costs
Signaling / Communication	1 ls	4500.00	\$4,500	5	20	15	in	1 Year	Video entry intercom system at main entrance; no problems/concerns reported; replacement costs
BUILDING ELEVATORS									
Shafts and Doorways	2 ea		\$0	25	30				Hydraulic-type elevators; reportedly maintained under the terms of a full service contract
Elevator Cabs	2 ea	15000.00	\$30,000	1	15	14	in	1 Year	Elevator cab interiors Costs for renovation efforts including door operator replacement
Controller/Dispatcher	2 ea		\$0	1	20				Elevator controller/dispatcher equipment
Machine Room Equipment	2 ea		\$0	1	30				Maintained under the terms of a full service contract Hydraulic-type elevators; reportedly maintained under the terms of a full service contract
Accessible Platform Lift	1 ea		\$0	1	25				Vertical platform lift; recently replaced; no problems/concerns reported Maintain and monitor - Operating

	Costs projected at 3%														BUILDING MECHANICAL AND ELECTRICAL									
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041				
BUILDING MECHANICAL																								
Compactors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Building Fire Suppression	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Distribution Piping Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Packaged RTU's	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Packaged RTU's	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$934,780	\$0	\$0	\$510,730	\$0				
Packaged RTU's	\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Packaged RTU's	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$153,219	\$0				
Split-System A/C	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,739	\$0	\$0	\$0	\$0				
Ductless A/C	\$0	\$0	\$0	\$21,855	\$0	\$0	\$0	\$12,299	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$34,049	\$0				
Heating/Ventilation Units	\$40,000	\$41,200	\$42,436	\$43,709	\$45,020	\$46,371	\$47,762	\$49,195	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Classroom Ventilators	\$640,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Ventilation & Exhaust	\$1,500	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739	\$1,791	\$1,845	\$1,900	\$1,957	\$2,016	\$2,076	\$2,139	\$2,203	\$2,269	\$2,337	\$2,407	\$2,479	\$2,554	\$2,630				
BUILDING ELECTRICAL																								
Building Power Wiring	\$7,500	\$0	\$0	\$0	\$0	\$8,695	\$0	\$0	\$0	\$0	\$10,079	\$0	\$0	\$0	\$0	\$11,685	\$0	\$0	\$0	\$0				
Security System	\$0	\$0	\$5,305	\$0	\$0	\$0	\$0	\$6,149	\$0	\$0	\$0	\$0	\$7,129	\$0	\$0	\$0	\$0	\$8,264	\$0	\$0				
Solar PV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Emergency Lights	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Smoke / Fire Detection	\$0	\$0	\$0	\$0	\$0	\$394,417	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Public Address System/Clocks	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Signaling / Communication	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,807	\$0	\$0	\$0	\$0	\$0				
BUILDING ELEVATORS																								
Shafts and Doorways	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Elevator Cabs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$44,056	\$0	\$0	\$0	\$0	\$0	\$0				
Controller/Dispatcher	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Machine Room Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Accessible Platform Lift	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				

Ottoson Middle School

BUILDING ARCHITECTURE

Replacement Items		Quantity	Cost per unit in 2022 \$\$	Total Cost in 2022 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule		Notes
(Expected Useful life)									
Year of action AND duration of project									
Notes									
STRUCTURE									
Foundation	1,520 lf		\$0	25+	100				Cast-in-place concrete foundation walls; localized cracking and deteriorated cementitious parge coat; costs with masonry work below
Framing	1 ls	20000.00	\$20,000	25+	100	6	in	1 Year	Localized evidence of water infiltration within basement level
Elevated Walkway	220 sf	25.00	\$5,500	25	100	1	in	1 Year	Costs for as-needed repairs
									Elevated concrete walkway at cafeteria emergency egress; exposed and corroded reinforcing steel noted; repair costs
BUILDING EXTERIOR									
Exterior Common Doors	19 ea	3750.00	\$71,250	25	35	10	in	1 Year	Fiberglass doors; predominantly at main entries; localized abrasions
Emergency Egress Doors	1 ea		\$0	<5	35				Future replacement costs; interim needs - Operating
	3 ttl								Single leaf fiberglass emergency egress doors
Emergency Egress Doors	1 ea	1750.00	\$1,750	varies	35	5	in	1 Year	Maintain and monitor - Operating
Emergency Egress Doors	1 ea	3500.00	\$3,500	25	35	10	in	1 Year	Single leaf hollow metal emergency egress doors
	9 ttl								Costs to replace doorway present at food receiving area
Service Doors	2 ea	1750.00	\$3,500	25	35	1 /6 /11 /16	in	1 Year	Double leaf hollow metal emergency egress doors
Overhead Door	1 ea	3750.00	\$3,750	25	30	5	in	1 Year	Future replacement costs
Automatic Door Operators	2 ea	2750.00	\$5,500	5	15	10	in	1 Year	Single and double leaf hollow metal service doors
	72,960 ttl sf	costs pending specifications							Costs for as-needed replacement
Exterior Walls - Masonry	10,944 sf	40.00	\$437,760	varies	60	1	in	1 Year	Metal overhead door present at food receiving area
Exterior Walls - Metal	2,235 sf		\$0	25+	40				Abrasions/wear; replacement costs
Exterior Caulking	9,865 lf	8.50	\$83,853	25	15	1	in	1 Year	Automatic door operators present at main entrance and vestibule
Steel Lintels	1 ls		\$0	25	20				Replacement costs
Exterior Ceilings	3,105 sf		\$0	25	30				Brick and stone cladding; several areas of mortar loss, cracking, and deterioration (rear of original building); repair costs
Window Frames	1,906 sf	25.00	\$47,660	25	35	1	over	15 Years	Painted metal cladding along upper wall areas at original building
Window Frames	12,709 ttl sf	costs pending specifications							Weathering/finish wear; refurbishment costs included w/ above
Storm / Screen Windows	ea								Caulking installed at window and door perimeters, control joints
Canopies	1 ls		\$0	25	25				Cohesive/adhesive failures; replacement costs; future with windows
Building Mounted Lighting	1 ls	7500.00	\$7,500	varies	15	11	in	1 Year	Steel lintels; corrosion and paint peeling noted
									Refurbishment costs included with Exterior Walls above
									Soffit siding at north end of building; serviceable condition
									Maintain and monitor - Operating
									Prefinished aluminum-framed fixed and operable windows
									Costs for as-needed replacement of failed and cracked IGU's
									Prefinished aluminum-framed fixed and operable windows
									Future replacement costs
									Canopy structures; pronounced vegetation growth and poor drainage noted from available vantage points; costs included with roof below
									Fixtures for site/security/entry area illumination
									Most have been retrofitted with LEDs; Replace fixtures in future

	Costs projected at 3%																BUILDING ARCHITECTURE				
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041	
STRUCTURE																					
Foundation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Framing	\$0	\$0	\$0	\$0	\$0	\$23,185	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Elevated Walkway	\$5,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
BUILDING EXTERIOR																					
Exterior Common Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$92,965	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Emergency Egress Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Emergency Egress Doors	\$0	\$0	\$0	\$0	\$1,970	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Emergency Egress Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,567	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Service Doors	\$3,500	\$0	\$0	\$0	\$0	\$4,057	\$0	\$0	\$0	\$0	\$4,704	\$0	\$0	\$0	\$0	\$5,453	\$0	\$0	\$0	\$0	
Overhead Door	\$0	\$0	\$0	\$0	\$4,221	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Automatic Door Operators	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,176	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Exterior Walls - Masonry	\$437,760	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Exterior Walls - Metal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Exterior Caulking	\$83,853	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Steel Lintels	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Exterior Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Window Frames	\$3,177	\$3,273	\$3,371	\$3,472	\$3,576	\$3,683	\$3,794	\$3,908	\$4,025	\$4,146	\$4,270	\$4,398	\$4,530	\$4,666	\$4,806	\$0	\$0	\$0	\$0	\$0	
Window Frames	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	#####	\$0	\$0	\$0	\$0	
Storm / Screen Windows	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Canopies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Building Mounted Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,079	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

Ottoson Middle School

BUILDING ARCHITECTURE--continued

BUILDING ARCHITECTURE--continued		(Expected Useful life)				Replacement Schedule		Notes
Replacement Items	Quantity	Cost per unit in 2022 \$\$	Total Cost in 2022 \$\$	AGE (Years)	EUL (Years)	Year of action AND duration of project		
ROOF SYSTEMS								
Structure	83,425 sf		\$0	25+	40			Flat roof structure; several areas of water ponding noted
		cost per mgmt.						Costs to address water ponding included with roof work below
Roof Covering	83,425 sf	30.00	\$2,502,750	25	20	1	in 1 Year	Mechanically fastened EPDM roof assembly; reportedly dates to rehabilitation; limited replacement to date; replacement costs
Roof Covering	100 sf		\$0	25	40			Limited standing seam metal roofs; good overall conditions
								Maintain and monitor - Operating
Roof Drainage	1 ls		\$0	25	20			Internal roof drains; several areas of water ponding, isolated displaced strainer domes; costs included with roof replacement work above
Skylights	ea							
Penthouses	ea							
Access Doors & Hatches	1 ls	7500.00	\$7,500	varies	35	5	in 1 Year	Metal access doorway, roof hatches; fair condition
								Future replacement costs
Chimneys	1 ls		\$0	40+	40			Brick masonry chimneys; mortar loss, cracking/deterioration
								Repair costs included with Exterior Walls above
HALLS								
Hallway Walls	76,485 sf	1.00	\$76,485	varies	5	1 /6 /11 /16	over 3 Years	Painted wall surfaces; periodic costs to carry out as-needed repainting efforts
Hallway Ceilings	25,045 sf	5.50	\$137,748	25	40	15	over 5 Years	Suspended ceiling tile; serviceable condition
		cost per mgmt.						Future replacement costs
Hallway Floors	25,045 sf	10.00	\$250,450	25	20	1	over 5 Years	Vinyl composition tile (VCT) flooring; localized cracking/wear
								Replacement costs
Hallway Doors	1 ls	10000.00	\$10,000	25	35	1 /6 /11 /16	in 1 Year	Predominantly solid core wood passage doors; localized damage/wear
								Costs for as-needed replacement of passage doors
Hallway Railings	lf							
Hallway Interior Lighting	1 ls		\$0	varies	20			Mix of T8 fluorescent tube and light-emitting diode (LED) fixtures
								Reportedly 70% are LED; maintain and monitor - Operating
STAIRS								
	5,562 sf	5.50	\$30,591	25	40	15	in 1 Year	Suspended ceiling tile; future replacement costs
Stair Walls and Ceilings	18,035 sf	1.00	\$18,035	varies	5	1 /6 /11 /16	in 1 Year	Painted wall surfaces; costs for repainting efforts
	5,562 ttl sf							Rubber flooring; localized wear
Stair Floors	1,391 sf	20.00	\$27,810	25	30	1 /6 /11 /16	in 1 Year	Costs for as-needed replacement
								Stairway fire doors
Stair Doors	1 ls		\$0	25	35			Maintain and monitor - Operating
								Stairway railings
Stair Railings	1 ls		\$0	25	35			Maintain and monitor - Operating

Projected Capital Needs Over Twenty Years

BUILDING ARCHITECTURE--continued																				
Costs projected at 3%																				
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041
ROOF SYSTEMS																				
Structure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof Covering	#####	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof Covering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof Drainage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Skylights	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Penthouses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Access Doors & Hatches	\$0	\$0	\$0	\$0	\$8,441	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chimneys	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
HALLS																				
Hallway Walls	\$25,495	\$26,260	\$27,048	\$0	\$0	\$29,556	\$30,442	\$31,356	\$0	\$0	\$34,263	\$35,291	\$36,350	\$0	\$0	\$39,720	\$40,912	\$42,139	\$0	\$0
Hallway Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$41,671	\$42,921	\$44,209	\$45,535	\$46,901	\$0
Hallway Floors	\$50,090	\$51,593	\$53,140	\$54,735	\$56,377	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hallway Doors	\$10,000	\$0	\$0	\$0	\$0	\$11,593	\$0	\$0	\$0	\$0	\$13,439	\$0	\$0	\$0	\$0	\$15,580	\$0	\$0	\$0	\$0
Hallway Railings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hallway Interior Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
STAIRS																				
Stair Walls and Ceilings	\$18,035	\$0	\$0	\$0	\$0	\$20,908	\$0	\$0	\$0	\$0	\$24,238	\$0	\$0	\$0	\$46,272	\$28,098	\$0	\$0	\$0	\$0
Stair Floors	\$27,810	\$0	\$0	\$0	\$0	\$32,239	\$0	\$0	\$0	\$0	\$37,374	\$0	\$0	\$0	\$0	\$43,327	\$0	\$0	\$0	\$0
Stair Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Stair Railings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Ottoson Middle School

BUILDING ARCHITECTURE--*continued*

		(Expected Useful life)							Notes	
Replacement Items	Quantity	Cost per unit in 2022 \$\$	Total Cost in 2022 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule				
Year of action AND duration of project										
LOBBIES/MAIL FACILITIES										
Lobby Walls & Ceilings	2,652	sf	4.50	\$11,934	25	40	15	in 1 Year	Suspended ceiling tile; future replacement costs	
	7,350	sf	1.00	\$7,350	varies	5	1 /6 /11 /16	in 1 Year	Painted wall surfaces; costs for repainting efforts	
			cost per mgmt.						Vinyl composition tile (VCT) flooring; localized cracking/wear	
Lobby Floors	2,652	sf	10.00	\$26,520	25	20	1	in 1 Year	Replacement costs	
CLASSROOMS/LIBRARY										
Classroom Ceilings	64,954	sf	5.50	\$357,247	25	40	15	over 10 Years	Suspended ceiling tile; serviceable condition	
Classroom Walls	87,270	sf	1.00	\$87,270	varies	10	1 /11	over 10 Years	Future as-needed replacement costs	
			cost per mgmt.						Painted wall surfaces	
	Classroom Floors	56,587	sf	10.00	\$565,870	25	20	1	over 10 Years	Costs for as-needed repainting efforts
Library Floors	8,367	sf	4.50	\$37,652	10	10	3 /13	in 1 Year	Vinyl composition tile (VCT) flooring; localized cracking/wear	
									Replacement costs	
	Classroom Cabinetry	1	ls	5000.00	\$5,000	varies	5	1 /6 /11 /16	in 1 Year	Broadloom carpeting present within library; serviceable condition
Classroom Miscellaneous	1	ls	50000.00	\$50,000	varies	5	1 /6 /11 /16	over 5 Years	Replacement costs	
									Wood cabinetry sets present within select classrooms	
									Costs for as-needed replacement	
OFFICE/ADMINISTRATION										
Office Ceilings	9,103	sf	5.50	\$50,067	25	40	15	over 5 Years	Suspended ceiling tile; serviceable condition	
Office Walls	19,200	sf	1.00	\$19,200	varies	10	1 /11	over 5 Years	Future replacement costs	
			cost per mgmt.						Painted wall surfaces	
	Office Floor Covering	6,374	sf	10.00	\$63,740	25	20	1	over 5 Years	Costs for as-needed repainting efforts
Office Floor Covering	2,729	sf	4.50	\$12,281	varies	10	5 /15	in 1 Year	Vinyl composition tile (VCT) flooring; localized cracking/wear	
									Replacement costs	
	Office Equipment	1	ls	\$0	varies	8			Broadloom carpeting	
GYMNASIUMS										
Gymnasium Ceilings	11,519	sf	costs pending specifications		40+	40			Roof framing within wood gym; maintain and monitor	
	9,131	sf	15.00	\$136,965	40+	40	1	in 1 Year	Suspended tile in blue gym; displacement/overhead risk; costs including insulation	
	Gymnasium Walls	25,230	sf	1.50	\$37,845	10+	10	1 /11	in 1 Year	Painted masonry; localized paint peeling/wear
Gymnasium Floors	9,131	sf	20.00	\$182,620	~15	20	5	in 1 Year	Repainting costs	
									Rubberized flooring within blue gym; serviceable condition	
	Gymnasium Floors	9,712	sf	4.50	\$43,704	25	10	1 /11	in 1 Year	Future replacement costs including weight room
Gymnasium Stage	1,807	sf	7.50	\$13,553	25	20	1	in 1 Year	Wood flooring within remaining gymnasium; age related wear	
									Costs for refinishing efforts	
	Gymnasium/Stage Equipment	1	ls	10000.00	\$10,000	varies	5	1 /6 /11 /16	in 1 Year	Wood stage; age related wear
Replacement costs										
Gymnasium dividers, curtains, bleachers, basketball nets, padding, etc.										
Costs for as-needed equipment repairs/replacement										

	Costs projected at 3%															BUILDING ARCHITECTURE--continued									
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041					
LOBBIES/MAIL FACILITIES																									
Lobby Walls & Ceilings	\$7,350	\$0	\$0	\$0	\$0	\$8,521	\$0	\$0	\$0	\$0	\$9,878	\$0	\$0	\$0	\$18,051	\$11,451	\$0	\$0	\$0	\$0					
Lobby Floors	\$26,520	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
CLASSROOMS/LIBRARY																									
Classroom Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$54,037	\$55,658	\$57,328	\$59,047	\$60,819	\$62,643					
Classroom Walls	\$8,727	\$8,989	\$9,258	\$9,536	\$9,822	\$10,117	\$10,420	\$10,733	\$11,055	\$11,387	\$11,728	\$12,080	\$12,443	\$12,816	\$13,200	\$13,596	\$14,004	\$14,424	\$14,857	\$15,303					
Classroom Floors	\$56,587	\$58,285	\$60,033	\$61,834	\$63,689	\$65,600	\$67,568	\$69,595	\$71,683	\$73,833	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Library Floors	\$0	\$0	\$39,944	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$53,682	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Classroom Cabinetry	\$5,000	\$0	\$0	\$0	\$0	\$5,796	\$0	\$0	\$0	\$0	\$6,720	\$0	\$0	\$0	\$0	\$7,790	\$0	\$0	\$0	\$0					
Classroom Miscellaneous	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593	\$11,941	\$12,299	\$12,668	\$13,048	\$13,439	\$13,842	\$14,258	\$14,685	\$15,126	\$15,580	\$16,047	\$16,528	\$17,024	\$17,535					
OFFICE/ADMINISTRATION																									
Office Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,146	\$15,600	\$16,068	\$16,550	\$17,047	\$0					
Office Walls	\$3,840	\$3,955	\$4,074	\$4,196	\$4,322	\$0	\$0	\$0	\$0	\$0	\$5,161	\$5,315	\$5,475	\$5,639	\$5,808	\$0	\$0	\$0	\$0	\$0					
Office Floor Covering	\$12,748	\$13,130	\$13,524	\$13,930	\$14,348	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Office Floor Covering	\$0	\$0	\$0	\$0	\$13,822	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,575	\$0	\$0	\$0	\$0	\$0					
Office Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
GYMNASIUMS																									
Gymnasium Ceilings	\$136,965	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Gymnasium Walls	\$37,845	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,861	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Gymnasium Floors	\$0	\$0	\$0	\$0	\$205,540	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Gymnasium Floors	\$43,704	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$58,735	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Gymnasium Stage	\$13,553	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Gymnasium/Stage Equipment	\$10,000	\$0	\$0	\$0	\$0	\$11,593	\$0	\$0	\$0	\$0	\$13,439	\$0	\$0	\$0	\$0	\$15,580	\$0	\$0	\$0	\$0					

BUILDING ARCHITECTURE--continued

Replacement Schedule

CAFETERIA

LOCKER ROOMS

RESTROOMS

Projected Capital Needs Over Twenty Years

	Costs projected at 3%															BUILDING ARCHITECTURE--continued									
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041					
CAFETERIA																									
Cafeteria Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$64,890	\$0	\$0	\$0	\$0	\$0					
Cafeteria Walls	\$9,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,095	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Cafeteria Floors	\$78,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Cafeteria Equipment	\$0	\$10,300	\$0	\$0	\$0	\$0	\$11,941	\$0	\$0	\$0	\$0	\$13,842	\$0	\$0	\$0	\$0	\$16,047	\$0	\$0	\$0					
Walk-In Freezer Compressor	\$0	\$0	\$2,652	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,564	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
LOCKER ROOMS																									
Locker Room Ceilings	\$2,942	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,954	\$0	\$0	\$0	\$18,976	\$0	\$0	\$0	\$0	\$0					
Locker Room Walls	\$4,013	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,392	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Locker Room Floors	\$18,281	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,567	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Locker Room Fixtures	\$2,500	\$0	\$0	\$0	\$0	\$2,898	\$0	\$0	\$0	\$0	\$3,360	\$0	\$0	\$0	\$0	\$3,895	\$0	\$0	\$0	\$0					
Locker Room Equipment	\$7,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,079	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
RESTROOMS																									
Restroom Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,024	\$0	\$0	\$0	\$0	\$0					
Restroom Walls	\$2,202	\$2,268	\$2,336	\$2,406	\$2,478	\$0	\$0	\$0	\$0	\$0	\$2,959	\$3,048	\$3,140	\$3,234	\$3,331	\$0	\$0	\$0	\$0	\$0					
Restroom Floors	\$6,740	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,057	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Restroom Floors	\$4,814	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Restroom Fixtures	\$7,500	\$7,725	\$7,957	\$8,195	\$8,441	\$8,695	\$8,955	\$9,224	\$9,501	\$9,786	\$10,079	\$10,382	\$10,693	\$11,014	\$11,344	\$11,685	\$12,035	\$12,396	\$12,768	\$0					
Restroom Accessories	\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478	\$3,582	\$3,690	\$3,800	\$3,914	\$4,032	\$4,153	\$4,277	\$4,406	\$4,538	\$4,674	\$4,814	\$4,959	\$5,107	\$0					

Appendix A: Statement of Delivery

Our Capital Needs Assessment (the "CNA" or the "Report") on the subject property is delivered subject to the following terms and conditions:

1. The report and analysis may be relied upon by you as a description of the observed current conditions of the building and site improvements, only as of the date of this report, and with the knowledge that certain limitations and exceptions within the report that are the reflective of the scope of services as defined in our contract. Although care has been taken in the performance of this assessment, ON-SITE INSIGHT, Inc. (and/or its representatives) makes no representations regarding latent or concealed defects that may exist and no warranty or guarantee is expressed or implied. This report is made only in the best exercise of our ability and judgment. Conclusions reached in this report assume current and continuing responsible ownership and competent property management.
2. We have undertaken no formal evaluation of environmental concerns, including but not limited to asbestos containing materials (ACMs), lead-based paint, chlorofluorocarbons (CFCs), polychlorinated biphenyls (PCBs), and mildew/mold.
3. Conclusions in this report are based on estimates of the age and normal working life of various items of equipment and/or statistical comparisons. Actual conditions can alter the useful life of any item. When an item needs immediate replacement depends on many factors, including previous use/misuse, irregularity of servicing, faulty manufacture, unfavorable conditions, Acts of God and unforeseen circumstances. Certain components that may be working when we made our inspection might deteriorate or break in the future without notice.
4. To prepare this report, we used historic data on capital activities and costs, blueprints (when available), and current prices for capital actions. We have not independently verified this information, have assumed that it is reliable, but assume no responsibility for its accuracy.
5. Unless otherwise noted in the report, we assume that all building components meet code requirements in force when the property was built.
6. If accessibility issues are referenced in the report, the site elements, common areas, and dwelling units at the development were examined for compliance with the requirements of the Uniform Federal Accessibility Standards (UFAS), and for Massachusetts properties, the Massachusetts Architectural Accessibility Board (AAB). The methodology employed in undertaking this examination is adapted from a Technical Assistance Guide (TAG-88-11) titled "Supplemental Information About the Section 504 Transition Plan Requirements" published by the Coordination and Review section of the U.S. Department of Justice Civil Rights Division, and the AAB Rules and Regulations, 521 CMR effective July 10, 1987. The Guide also incorporates the requirements of UFAS, published April 1, 1988 by the General Services Administration, the Department of Defense, the Department of Housing and Urban Development, and the U.S. Postal Service. Changes in legislation and/or regulations may make some observations moot.
7. Response Actions and estimated costs of responses were developed by ON-SITE INSIGHT, Inc. If additional structural work is necessary, costs for some Response Actions may exceed estimates. Whenever the Response Action is to remove, reposition, or modify walls, a competent structural engineer should be retained before any work is done, because such investigation may disclose that a Response Action is either more costly than estimated, or is not possible.
8. Conclusions reached in this report assume current and continuing responsible ownership and competent property management. Any unauthorized reliance on or use of the report, including any of its information or conclusions, will be at the third party's sole risk. For the same reasons, no warranties or representation, express or implied in this report, are made to any such third party. Reliance on the report by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the contract Terms and Conditions. The limitation of liability defined in the Terms and Conditions is the aggregate limit of ON-SITE INSIGHT's liability to the client and all relying parties.
9. Regular updates of this plan are recommended to ensure careful monitoring of major building systems and to adjust the program to accommodate unanticipated circumstances surrounding the buildings, operations, and/or occupants.



Town of Arlington, Massachusetts

Gibbs 2024-25 Space Considerations



Town of Arlington, Massachusetts

New Business



Town of Arlington, Massachusetts

Adjournment



Town of Arlington, Massachusetts

Submitted by Jeff Thielman